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January 8, 2007

MAIL STOP APPEAL BRIEF- PATENTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: In re Application of: Gillston et al.  
Serial No.: 10/726,262  
Filed: December 2, 2003  
For: Catalytic Combustion Surfaces And Method For  
Creating Catalytic Combustion Surfaces  
Attorney Docket No.: 01-40147-USC1

Dear Sir:

Enclosed for filing is the Appellant's Brief pursuant to the Notice of Appeal filed October 6, 2006. The following documents are submitted herewith:

- 1) Appeal Brief;
- 2) A copy of the Terminal Disclaimer which was filed on October 6, 2006 (Exhibit A);
- 3) A Credit Card Authorization in the amount of \$250.00; and
- 4) A self-addressed stamped return receipt postcard

EXPRESS MAIL CERTIFICATE (37 C.F.R. 1.10)

Express Mail Label No. EV 482 562 023 US

Date of Deposit January 8, 2007

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Name Dolores A. Springfield

Signature

*Handwritten signature of Dolores A. Springfield*

Commissioner for Patents  
January 8, 2007  
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Reed Smith

The Commissioner is hereby authorized to charge any additional fees required or credit any overpayment in connection with this filing to Deposit Account No. 18-0586

Respectfully submitted,

/

A handwritten signature in black ink, appearing to read "Justin C. Allen", written over a horizontal line.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In Re Application of:** Gillston et al. : **Group Art Unit:** 3747  
:   
**U.S. Application No:** 10/726,262 : **Examiner:** Huynh, Hai H.  
:   
**Filing Date:** December 2, 2003 : **Docket No.:** 01-40147-US-C1  
  
**For:** **CATALYTIC COMBUSTION SURFACES AND METHOD FOR  
CREATING CATALYTIC COMBUSTION SURFACES**

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**APPEAL BRIEF**

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Mail Stop Appeal Brief-Patents  
Commissioner for Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The above-identified patent application comes before the United States Patent and Trademark Office Board of Appeals and Interferences from the Final Rejection of Claims 1-2 by the Examiner in an Official Action mailed April 6, 2006. Pursuant to the Notice of Appeal filed October 6, 2006, set forth below is the Appellant's Brief. An additional copy of this Brief together with the requisite fee set forth in 37 C.F.R. 41.20(b)(2) and 37 C.F.R. 1.17(f) are enclosed.

**EXPRESS MAIL CERTIFICATE (37 CFR 1.10)**

Express Mail Label No. EV 482 562 023 US

Date of Deposit: January 8, 2007

I hereby certify that this paper, and the papers and/or fees referred to herein as transmitted, submitted or enclosed, are being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Name: Dolores A. Springfield

Signature: Dolores A. Springfield

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**I. Real Party in Interest:**

The real party in interest in the above-captioned application is Alliance Remanufacturing of 450 E. Luzerne Street, Philadelphia, PA 19124.

**II. Related Appeals and Interferences:**

There are no appeals or interferences known to Appellant or Appellant's legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in this present appeal.

**III. Status of Claims:**

Claims 1 and 2 have been rejected under the doctrine of non-statutory double patenting as being unpatentable over claims 1-65 of U.S. Pat. No. 6,655,369.

Claim 2 has been rejected under 35 U.S.C. 102(b) as being anticipated by Rao (U.S. Pat. No. 5,477,820).

Claims 1-2 are the subject of the present appeal.

**IV. Status of Amendments:**

Amendment of claim 2 was sought in response to the Final Office Action of April 6, 2006, however the Examiner refused entry of these amendments. Claims 1-2, including the amendments proposed by Applicant in response to the Final Office Action, are shown in the CLAIMS APPENDIX, attached hereto.

**V. Summary of Claimed Subject Matter:**

As recited in claim 1, the present invention is an internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a closest point to the closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between greater than 15% and about 80% nickel and between about 10% and about 37% chromium, such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases (page 5, line 12 to page 8, line 2).

As recited in claim 2, the present invention is an internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a

closest point to the closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between about 25% and about 37% chromium such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases (page 5, line 12 to page 8, line 2).

**VI. Grounds Of Rejection To Be Reviewed On Appeal:**

**GROUND 1**

Whether claims 1-2 are unpatentable under the doctrine of non-statutory double patenting as being unpatentable over claims 1-65 of U.S. Pat. No. 6,655,369.

**GROUND 2**

Whether claim 2 is unpatentable under 35 U.S.C. 102(b) as being anticipated by Rao (U.S. Pat. No. 5,477,820).

**GROUND 3**

Whether the finality of the rejection of the Office Action dated April 6, 2006 was improper.

**VII. Argument:**

**GROUND 1**

*Whether claims 1-2 are unpatentable under the doctrine of non-statutory double patenting as being unpatentable over claims 1-65 of U.S. Pat. No. 6,655,369.*

In the April, 2006, Office Action, the Examiner asserted, *for the first time*, a double patenting rejection of claims 1 and 2 under the doctrine of non-statutory double patenting as being unpatentable over claims 1-66 of U.S. Pat. No. 6,655,369. Without having conceded to the Examiner's characterization, Applicant submitted the requested disclaimer over Applicant's '369 patent in the response dated October 6, 2006.

Applicant complied with the Examiner's required action, and accordingly claims 1 and 2 should be allowed over the double patenting rejections by the asserted Examiner. As no other rejection has been raised by the Examiner, Claim 1 stands in allowable condition.

Accordingly, as Applicant has provided the requested disclaimer, the present rejection should be reversed by the Board.

**GROUND 2**

*Whether claim 2 is unpatentable under 35 U.S.C. 102(b) as being anticipated by Rao (U.S. Pat. No. 5,477,820).*

In the present Office Action, the Examiner rejected claim 2 under 35 U.S.C. §102(b) as being unpatentable over Rao, U.S. Pat. No. 5,477,820.

35 U.S.C. § 102 recites, in part:



A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States...

Consistently, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *See, M.P.E.P. §2131 citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).*

Applicant sought to amend claim 2 in view of the new rejection raised by the Examiner. The Examiner refused to enter the Amendment, arguing without support that the proposed amendment would raise new issues requiring consideration. The Examiner provided no support for this positioning and in effect refused to allow Applicant to respond to the two rejections in the April, 2006, Office Action, each of which had been raised for the first time.

As sought to be amended, Claim 2 of the present patent application distinguished the Rao reference. Rao is directed towards an insulating barrier applied to the face of a piston, in order to retard thermal conduction through the piston face. The thermal barrier ("heat management coatings" or "thermal diffusivity coatings" in the lexicon of Rao) is recited as having about 20% chromium, and claimed as having 22% by weight of chromium. As amended, the lower limit of chromium in the coating of the present invention has been increased "to about 25%" from "about 10%," and accordingly claim 2 as amended is not anticipated by Rao.

Furthermore, as Rao teaches thermal coatings, rather than catalytic effects, there is no suggestion that Rao can be combined with any other reference with respect to assertions of obviousness.

Accordingly, Applicant believes that Rao neither anticipates claim 2 as amended, nor is claim 2 obvious in view of Rao, and accordingly, claim 2 as amended is believed to be in allowable condition, and therefore, the rejection of this claim over the reference should be reversed by the Board.

### **GROUND 3**

*Whether the finality of the rejection of the Office Action dated April 6, 2006 was improper.*

The Examiner may make an Office Action final where:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

MPEP 706.07(a). Notwithstanding that the Office Action of April 6, 2006 was the third Office Action in the present case, and as noted above, the Examiner raised for the first time a double patenting rejection, as well a new rejection of claim 2, asserting the claim to be anticipated by Rao, simply stating that "Rao teaches a coating having about 20% chromium." Claim 2 as previously presented included a lower limit of about 10% chromium. That limitation, however, was neither amended in nor discussed in the previous rejection, and accordingly the Examiner's contention that the new rejection was raised by some action of Applicant's is erroneous.

As the present rejections are not necessitated by any action or amendment of Applicant, Applicant believes that the Examiner incorrectly classified the Office Action as final, and accordingly requests withdrawal of the Final classification of the April 6, 2006 Office Action by the Board.

\* \* \*

In view of the foregoing discussion, it is respectfully submitted that the Examiner's rejection of claims 1-2 are improper and should be reversed by the Board.

Respectfully submitted,

**REED SMITH LLP**

Dated: 1/8/2007

By: 

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## **VIII.**

## **CLAIMS APPENDIX**

Claim 1. (Previously amended) An internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a closest point to the closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between greater than 15% and about 80% nickel and between about 10% and about 37% chromium, such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases.

Claim 2. (Currently Amended) An internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a closest point to the

closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between about 25% ±0% and about 37% chromium such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases.

Claim 3. (Previously withdrawn) A method for fabricating a reduced emissions diesel engine component, wherein said component forms a combustion surface for a diesel engine and wherein a portion of said component which forms a combustion surface has inadequate material to meet design geometry, comprising the steps of

coating at least the portion of said component which forms a combustion surface with a substantially homogenous coating having at least sufficient thickness to allow said surface to meet design geometry, wherein said coating comprises nickel, chromium, and iron; and

machining a portion of the coating from the surface to restore desired tolerances.

**IX. Evidence Appendix**

Exhibit A is a terminal disclaimer filed October 6, 2006 by Applicant.

**X. Related Proceedings**

No copies of decisions rendered by a court or the Board are provided because there are no appeals or interferences known to Appellant or Appellant's legal representative that will directly affect or be directly affected by or have a bearing on the Board's decision in this present appeal.



PTO/SB/26 (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**TERMINAL DISCLAIMER TO OBTAIN A DOUBLE PATENTING  
REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)  
01-40147-US-C1

In re Application of: Gillston et al.

Application No.: 10/726,262

Filed: December 2, 2003

For: Catalytic Combustion Surfaces And Method For Creating Catalytic Combustion Surfaces

The owner\*, Alliance Remanufacturing, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term prior patent No. 6,655,369 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

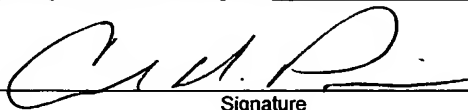
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 45,730

  
SignatureOctober 6, 2006  
DateCarl H. Pierce  
Typed or printed name215-241-7970  
Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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\*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).  
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This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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